FACTORS INFLUENCING THE ADOPTION OF FINTECH SERVICES OF PUBLIC SECTOR BANKS IN VIRUDHUNAGAR DISTRICT, TAMIL NADU.

A SYNOPSIS

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1. INTRODUCTION

Financial technology, or fintech, is converting how people interact with money. Combining the power of technology with financial services, fintech has transformed everything from how we save, spend, invest, and borrow money to how businesses operate and grow. During and after the pandemic people are using the fintech applications frequently for their financial transactions [1]. People are using fintech apps for several reasons but they are adopting based on some aspects

1.1. Background of the Study

The bank industry in Southern Tamil Nadu has grown significantly, driven by using technology, user experience, and improved infrastructure [2]. While previous studies have highlighted the importance of factors such as perceived ease of use, perceived usefulness, and performance expectancy, there is a lack of comprehensive research examining how these variables interact and collectively impact users' attitudes and intentions toward adopting Fintech apps [3].

2. LITERATURE REVIEW

2.1. Fintech Adoption in Banking Sector

The main distinctions between Gen Z and Millennial customers in the fintech industry were examined by Abu et al. [4]. The author discovered through the use of a questionnaire-based methodology that which generations had a high level of intention to use fintech services. The findings show that, compared to Gen Z, millennials have better intentions, knowledge, and awareness in the field of fintech. As a result of its widespread adoption across generations, the author came to the essential conclusion that e-wallets are a crucial fintech application that helps to develop e-banking services through digital devices such as smartphones.

Aseng concentrated on the elements that might affect Gen Z's decision to adopt online banking transactions and discovered the five independent variables under test [5]. There are expectations for perceived safety, social power, tradition, endeavor, and performance. The researcher utilized and

disclosed the questionnaire and the practical snowball sampling approach. Additionally, the author employed SPSS's facilities for summary and multiple linear regression testing. The findings indicate that to appeal to Gen Z, service providers must take these elements into consideration. According to the outcomes, most Gen Z people are familiar with and use mobile payments.

A methodology for analyzing the fintech sector was created by Tan et al. The author concentrated on customer requirements, particularly those of millennials and technology natives, who are rapidly demanding ease, speed, and cost effectiveness in financial services [6]. For this study, quantitative data analysis was used. The author discovered that certain quickly developing emerging economies have embraced fintech, an emergent field of technology involving networks, big data, and mobile devices. They concluded that leveraging IT collaboration platforms has created many business prospects for prospective competitors in the financial sector.

Rajeswari and Vijai discussed the use of fintech, the fintech information platform, the Indian fintech sector, and fintech startups and trends in India the author came to a conclusion after providing an outline of the Indian financial technology sector and financial measures supported by the government [7]. Fintech provides consumers with financial products and services more quickly. Future developments in the financial sectors will be attained by the use of fintech technologies.

2.2. Perceived Ease of Use

This research examined the application of technology adoption frameworks, including TAM, UTAUT, and their variations, across different domains like e-finance, e-learning, and mobile banking.

Hasyim et al. [8] explored the factors influencing the adoption of Sharia FinTech by MSMEs in Bandar Lampung. A quantitative approach was used, involving a survey of 400 participants. The main findings revealed that perceived usefulness, trust, and Islamic financial literacy positively affected the adoption of Sharia FinTech, while perceived ease of use did not have a significant effect. The results suggest that boosting trust, enhancing Islamic financial literacy, and refining application features could promote greater FinTech adoption, ultimately supporting financial inclusion for MSMEs.

Pirdayanti et al. [9] explored how perceived risk, perceived usefulness, and perceived ease of use influence the adoption of financial technology (fintech) among students at Udayana University. Data was gathered from 100 participants through questionnaires and analyzed using factor analysis and multiple linear regression. The findings revealed that perceived risk, usefulness, and ease of use positively affected the adoption of fintech. The study highlighted that the benefits of fintech, its user-friendliness, and privacy protections played a significant role in boosting user engagement, offering valuable insights for improving fintech applications and strategies for adoption.

Tun-Pin et al. [10] explored the adoption of FinTech services in Malaysia using the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT). An analysis of data from 300 participants revealed that factors like perceived ease of use, perceived usefulness, social influence, personal innovativeness, security concerns, and enjoyment significantly impacted the adoption of FinTech. Furthermore, it was observed that younger individuals and male users showed a higher intention to embrace these services. These findings highlight key aspects for financial institutions looking to enhance user-centered FinTech offerings and promote wider adoption.

Juliyanti et al. [11] explored how security, perceived usefulness, and perceived ease of use influence the intention to adopt fintech among 1,604 university students in Batam City during the 2022 academic year. The quantitative analysis revealed that these factors had significant positive impacts, both together and separately. In particular, security and perceived usefulness emerged as key drivers, enhancing trust and perceptions of efficiency. These results underscore the importance of emphasizing these aspects to promote fintech adoption among students.

2.3. Perceived Usefulness

Bureshaid et al. [12] explored how FinTech services are being integrated into the banking sector, focusing on the factors that influence consumer behavior. It applied the Technology Acceptance Model (TAM) and the Diffusion of Innovation Theory (DOI) to assess how perceived usefulness, ease of use, and risk impact user intentions. The findings highlighted the importance

of addressing perceived risks and developing customer-centric solutions to enhance adoption rates. This research provides valuable insights for banks to adjust their strategies in response to the evolving needs of consumers in the digital era.

Helmi et al. [13] explored the factors influencing the adoption of fintech peer-to-peer lending by MSMEs in Indonesia, focusing on perceived ease of use, perceived usefulness, attitude, and trust as described in the Technology Acceptance Model. Data was collected from 64 participants and analyzed using SmartPLS. The results showed that perceived usefulness had a significant impact on both attitudes and trust, with trust strongly influencing user interest. In contrast, perceived ease of use did not significantly affect user interest, highlighting a complex landscape of adoption dynamics.

Ramli et al. [14] explored how perceived ease of use and perceived usefulness influence customers' intentions to use the Mega Mobile banking application in Jakarta, Indonesia, with trust acting as an intervening variable. Utilizing both descriptive and verification research methods, data from 236 respondents were analyzed through Partial Least Square (PLS) techniques. The findings indicated that perceived usefulness had a greater impact on the intention to use the application compared to perceived ease of use, underscoring the critical role of trust. Furthermore, technical limitations were recognized as obstacles to the application's adoption.

Gunawan et al. [15] explored how trust, usability, and perceived usefulness influence the repurchase intentions of students from Universitas Sebelas Maret using Cicil.co.id. Data was collected through questionnaires sent to 65 participants, and regression analysis revealed that both trust and usability significantly impacted repurchase intentions, while perceived usefulness did not have a meaningful effect. The findings underscored the importance of building trust and providing a user-friendly experience to enhance customer loyalty in fintech services aimed at educational institutions. These insights highlight the need to establish trust and create intuitive platforms to boost user retention in the educational fintech industry.

2.4. Performance Expectancy

Brock et al. [16] explored how trust, usability, and perceived

usefulness influence the repurchase intentions of students from Universitas Sebelas Maret using Cicil.co.id. Data was collected via questionnaires filled out by 65 participants, and regression analysis revealed that both trust and usability significantly impacted repurchase intentions, while perceived usefulness did not show a significant effect. The results emphasized the importance of building trust and providing a user-friendly experience to sustain customer loyalty in fintech services aimed at educational users.

Hamzat et al. [17] explored the influence of performance expectancy and facilitating conditions on the use of digital libraries by engineering lecturers at universities in South-west Nigeria. Using a descriptive survey research design, data were collected from 566 participants. The findings revealed that performance expectancy significantly affected usage, while enhanced facilitating conditions, such as infrastructure and training, were essential for successful adoption. The study recommended that improving resources, power supply, and internet bandwidth is vital to encourage the continued use of digital libraries.

2.5. Social Influence

Chua et al. [18] explored the factors that affect how Millennials in Malaysia intend to use and engage with social networking applications. Using the Unified Theory of Acceptance and Use of Technology (UTAUT), the study analyzed data from 384 participants. The findings revealed that performance expectancy, effort expectancy, and social influence significantly impacted behavioral intention, which in turn affected actual usage behavior. Furthermore, experience was identified as a moderating factor in the relationship between effort expectancy and behavioral intention. These insights are valuable for app developers looking to enhance adoption rates among younger users.

Singh et al. [19] explores the adoption of FinTech by using a modified technology acceptance model (TAM) that integrates aspects from the UTAUT, ServPerf, and WebQual 4.0 frameworks. An analysis of data gathered from 439 internet users, performed through structural equation modeling, revealed that perceived usefulness and social influence are significant factors affecting behavioral intentions. Furthermore, ease of use and social influence are essential in determining actual usage. Technological aspects such as security

and responsiveness are crucial for user adoption. The findings offer valuable insights for FinTech providers looking to improve user-focused features to boost service adoption and utilization.

2.6. Facilitating Conditions

Harryadin Mahardika et al. investigates how internal (experience) and external (facilitating conditions) impediments affect the predictive abilities of Behavioral Intention (BI) and Behavioral Expectation (BE) in new technology adoption [20]. Findings reveal that BE provides more accurate and consistent predictions, especially under conditions of low experience or limited facilitating conditions, as it accounts for foreseeable impediments. BI, in contrast, tends to overestimate adoption likelihood under low internal control and underestimate it under external constraints. The study emphasizes the importance of addressing these impediments in marketing strategies to improve technology adoption rates and suggests that BE might be a more effective predictor in scenarios marked by uncertainty.

2.7. Hedonic Motivations

Nikolopoulou et al. [21] explored the intentions of Greek primary and secondary school teachers regarding the use of mobile internet in educational environments, utilizing an expanded version of the UTAUT2 model that includes the Technological Pedagogical Knowledge (TPK) construct. The findings revealed that Habit, Hedonic Motivation, Performance Expectancy, and TPK significantly influenced teachers' intentions, with Behavioral Intention being the strongest predictor of actual usage. These findings underscore important implications for teacher training and educational policy aimed at enhancing the effective integration of mobile technology in teaching, particularly in light of the COVID-19 pandemic.

2.8. Perceived Risk

Shaikh et al. [22] explored the adoption of mobile banking in Pakistan, focusing on aspects like risk perceptions, effort expectancy, and performance expectancy. Analyzing survey responses from 189 participants, the results showed that perceived risk had a limited direct impact but played a significant role in moderating the relationship between effort expectancy and key

behavioral factors. Effort expectancy emerged as a strong predictor of the intention to adopt mobile banking. These findings emphasize the need for developing secure and user-friendly interfaces, as well as customized educational programs, to enhance adoption rates in developing countries.

2.9. Perceived Benefits

Poonam Garg et al [23] investigates the perceived benefits of implementing blockchain technology in the banking sector and develops a measurement tool for these benefits. Using data from 291 blockchain consultants, marketing experts, and banking executives, the researchers identify five core constructs: quality customer services (e.g., enhanced transparency and trust), reduced costs (e.g., lower transaction and operational costs), efficiency and security (e.g., faster and safer transactions), secure remittances (e.g., better traceability and robustness), and regulatory compliance (e.g., improved fraud prevention and adherence to rules). The study confirms the reliability and validity of the instrument, offering a robust framework for decision-makers to evaluate blockchain's potential in transforming banking operations.

Komlan et al., [24] evaluates mobile banking adoption in Togo using the Analytic Hierarchy Process (AHP), focusing on perceived benefits and sacrifices. It identifies financial risk as the most significant barrier, followed by money saved and security/privacy concerns. The study highlights those perceived benefits, like time and cost savings, strongly drive adoption, whereas perceived sacrifices, particularly financial and security risks, hinder it. The research suggests that mobile banking providers should reduce transaction costs, enhance security, and address financial risks to improve adoption rates and customer satisfaction. The findings contribute to mobile banking strategies in developing countries.

2.10. Attitude

Helmi et al. [13] explored how perceived ease of use, perceived usefulness, attitude, and trust influence the adoption of fintech peer-to-peer (P2P) lending among MSMEs, with support from Bina Darma University. Using the Technology Acceptance Model (TAM), data from 64 participants were analyzed through SmartPLS. The findings revealed that ease of use significantly impacts both perceived usefulness and attitude, while trust is

essential for generating user interest. However, perceived usefulness did not directly affect user interest. Future research should consider security and risk factors.

2.11. Behavioral Intention

Ho et al. [25] explored the factors influencing the intention to adopt mobile banking in Taiwan and Vietnam. By integrating the Diffusion of Innovations theory, the Technology Acceptance Model, and the Decomposed Theory of Planned Behavior, it identified key elements such as compatibility, perceived usefulness, and perceived behavioral control. Significant differences were noted between the two countries, especially regarding the role of trialability in Vietnam. Furthermore, subjective norms and perceived risks were found to indirectly affect attitudes. The results provide important insights for creating tailored strategies to encourage mobile banking adoption in various cultural contexts.

Alblooshi et al. [26] explored the relationship between performance expectancy and the actual use of e-learning, with behavioral intention serving as a mediating factor among students at Abu Dhabi Higher College of Technology. A quantitative approach was taken, analyzing 406 survey responses using PLS-SEM. The findings revealed that behavioral intention significantly mediates the adoption of e-learning. This study underscores the importance of institutional efforts to promote e-learning, ultimately enhancing frameworks for higher education adoption in developing areas.

Hu et al. [27] explored the factors influencing the adoption of Fintech services among banking customers by utilizing an enhanced Technology Acceptance Model. By incorporating elements like user innovativeness, government support, brand reputation, and perceived risk, the model evaluated how trust affects adoption behavior. Data from 387 users of Hefei Science and Technology Rural Commercial Bank were analyzed through structural equation modeling. The results showed that trust, government backing, and brand reputation significantly influenced user attitudes, while perceived risk negatively impacted trust. These findings offer important insights for developing Fintech strategies.

Putra et al. [28] explored how trust plays a vital role in the acceptance

of mobile banking applications at regional banks in Bali, Indonesia. An analysis of data from 300 users revealed that perceived ease of use, usefulness, and value positively influenced both trust and the intention to use mobile banking services. Trust was identified as a significant mediator in these relationships. The findings suggest that enhancing usability and reliability could boost user engagement. However, challenges like connectivity issues and limited features pose obstacles to broader adoption. The study also offered practical strategies to tackle these challenges.

3. RESEARCH GAP

The rapid growth of Fintech applications has revolutionized the financial services industry, offering users convenient, efficient, and accessible solutions. However, understanding the diverse demographic and behavioral profiles of users and their influence on the adoption of Fintech apps remains a challenge. While previous studies have highlighted the importance of factors such as perceived ease of use, perceived usefulness, and performance expectancy, there is a lack of comprehensive research examining how these variables interact and collectively impact users' attitudes and intentions toward adopting Fintech apps.

Additionally, demographic variations may significantly influence behavioral intentions, yet the specific differences remain underexplored. A conceptual framework that integrates these factors and validates their interrelationships is crucial for developing strategies to enhance adoption rates and improve user experiences. The absence of such an integrated analysis limits the ability of Fintech providers to tailor their services effectively to diverse user groups and maximize engagement.

Therefore, the study seeks to address these gaps by categorizing user profiles, analyzing their usage trends, and examining the strength and direction of relationships among critical factors. This research aims to validate a conceptual framework that links perceived ease of use, perceived usefulness, performance expectancy, attitude, behavioral intention, and adoption, providing actionable insights for Fintech providers.

3.1. Key Research Gaps:

1. Limited Regional Focus

2. Lack of Study on Public Sector Banks
3. Behavioral and Psychological Factors
4. Limited Integration of Multiple Theories
5. Overlooked Impact of Government Policies
6. Technological Challenges
7. Impact of Socio-Cultural Factors

3.2. Hypothesis

H_1: Perceived Ease of Use positively influences Attitude toward Fintech apps.

H_2: Perceived Usefulness positively influences Attitude toward Fintech apps.

H_3: Performance Expectancy positively influences Attitude toward Fintech apps.

H_4: Social Influence positively influences Attitude toward Fintech apps.

H_5: Facilitating Conditions positively influence Attitude toward Fintech apps.

H_6: Hedonic Motivation positively influences Attitude toward Fintech apps.

***H_7*:** Perceived Risk negatively influences Attitude toward Fintech apps.

H_8: Perceived Benefits positively influence Attitudes toward Fintech apps.

H_9: Performance Expectancy positively influences Behavioral Intention to use Fintech apps.

H_{10}: Social Influence positively influences Behavioral Intention to use Fintech apps.

H_{11}: Facilitating Conditions positively influence Behavioral Intention to use Fintech apps.

H_{12}: Hedonic Motivation positively influences Behavioral Intention to use Fintech apps.

H_{13}: Perceived Risk negatively influences Behavioral Intention to use Fintech apps.

H_{14}: Perceived Benefits positively influence Behavioral Intention to use Fintech apps

H_{15}: Attitude positively influences Behavioral Intention to adopt Fintech apps.

H_{16}: Behavioral Intention positively influences the Adoption of Fintech apps.

4. RESEARCH OBJECTIVES

The objectives of the research work are:

- To categorize the demographic and behavioral profiles of Fintech app users and understand their usage trends.
- To explore the factors shaping user attitudes and behavioral intentions toward adopting fintech applications and their impact on recommendations and adoption.
- To compare the differences in behavioral intention to adopt Fintech apps based on demographic profile of the users.
- To identify the strength and direction of relationships between variables

such as perceived ease of use, perceived usefulness, performance expectancy, and attitude.

- To identify and quantify the influence of factors such as perceived ease of use, perceived usefulness, and performance expectancy on attitude toward Fintech apps.
- To validate the proposed conceptual framework and analyze the relationships among attitude, behavioral intention, and adoption of Fintech apps.

5. RESEARCH METHODOLOGY

5.1. Conceptual Framework

The analytical framework of this study portrays the interconnections between Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Performance Expectancy (PE), Social Influence (SI), Facilitating Conditions (FC), Hedonic Motivation (HM), Perceived Risk (PR), Perceived Benefits (PB), Attitude (ATT), Behavioral Intention (BI) and adoption of fintech services of PSB in Virudhunagar District. The conceptual framework designed for the study attempts to examine the factors influencing the adoption of Fintech Applications among the customers with reference to selected public sector banks in Virudhu Nagar Districts. From the above-mentioned concept, the following hypothesis are formed in order to test the hypothetical relationships depicted in the conceptual model. Figure 1 portray the conceptual model of the research.

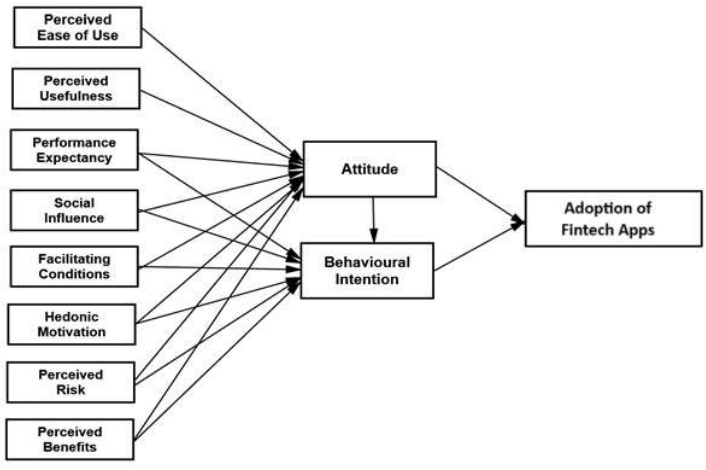

Figure 1 - Conceptual Framework

5.2. Research Design

Research design is required because it helps the various research activities go smoothly, making research as efficient as possible, and giving maximum information with the least amount of work, time, and money. In general, a good design reduces bias while increasing the reliability of the data collected and processed. Claire et al. (1962) define research design "as the creation of settings for data collection and analysis in a manner that strives to blend relevance to the research purpose with efficiency in procedure". In the current study, the researcher has employed a quantitative approach, to examine the factors influencing the adoption of Fintech applications with respect to the selected public sector banks in Virudhunagar District.

5.3. Questionnaire Design

A structured questionnaire was created to assess Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Performance Expectancy (PE), Social Influence (SI), Facilitating Conditions (FC), Hedonic Motivation (HM), Perceived Risk (PR), Perceived Benefits (PB), Attitude (ATT), Behavioral Intention (BI) and Adoption of fintech apps based on prior research. Demographic data (gender, age, income) were also collected. Responses used a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree).

5.4. Banks and Sampling Selection

Table 1 - Bank and no. of Samples

S. No	Company Name	Targeted Samples	Valid Samples Received	Valid Response Rate
1	State Bank of India	150	148	98.67 %
2	Bank of Baroda	150	143	95.33 %
3	Punjab National Bank	150	143	95.33 %
4	Indian Overseas Bank	150	142	48.67 %
5	Canara Bank	150	142	94.67 %
	Total	750	718	95.73 %

This Table 1 shown the sample distribution of research gathered responses from 750 samples (150 per selected public sector bank), which includes 32 illogical, incomplete, and outlier responses. So, the final sample size of the research is 718. Quota sampling technique was adopted to select the

samples from the target population.

5.5. Data Analysis

From the percentage analysis it is found that majority (72.0%) of the sampled fintech users of public sector banks who responded in the current study were male, likewise it is also establish from the analysis that majority (50.8%) of the fintech users were married. It is resulted out frequency analysis that majority (55.2%) of the sampled fintech users of public sector banks opined that undergraduate as their basic educational qualification, which has accounted to 396 in size. The findings also revealed that majority of users (65.2%) adopted FinTech services after six months hence they fall under the category of late adopters, indicating a preference for waiting until the services are proven or widely accepted.

Factors of attitude, behavioral intention and adoption toward fintech apps – Descriptive

Table 2. Factors of attitude, behavioral intention and adoption toward fintech apps Descriptive

Factors	Mean	Std. Deviation
Perceived ease of use	3.83	1.034
Perceived usefulness	3.96	.976
Performance expectancy	3.75	1.039
Social influence	3.73	.975
Facilitating conditions	3.69	1.057
Hedonic motivation	3.87	1.022
Perceived risk	2.55	1.054
Perceived benefits	3.86	.957
Attitude	3.90	1.065
Behavioral intention	3.63	1.022
Adoption of fintech apps	3.60	1.023

The analysis of various factors influencing the adoption of fintech users reveals interesting insights. Among the factors', Perceived Usefulness has the highest mean score of 3.96, indicating that users find fintech applications helpful for improving their performance and efficiency shown in Table 2. Hedonic Motivation follows closely at 3.87, suggesting that users also find the use of fintech apps enjoyable and fun. On the other hand, Perceived Risk has the lowest mean of 2.55, indicating that users generally do not feel highly concerned about the risks associated with using fintech apps. Other factors like Attitude (3.90) and Perceived Benefits (3.86) reflect a positive outlook toward

fintech adoption, as users view these apps as beneficial and better than traditional banking. Behavioral Intention (3.63) and Adoption of fintech services (3.60) indicate moderate to high intentions for future use.

5.6. Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) is a statistical technique used to test whether a set of observed variables (indicators) represents in Table 3 the underlying latent constructs (factors) that are hypothesized in a theoretical model. Unlike Exploratory Factor Analysis (EFA), which is used to explore the structure of data without a pre-specified model, CFA is used to confirm whether the data fits an expected factor structure based on a theory or prior research.

Table 3 - Results of Cronbach's Alpha Reliability Test

Construct and Items	Mean	Std. Deviation	Factor Loading	CR	Cronbach Alpha	AVE
AI1	3.74	1.265	0.748	0.738	0.823	0.537
AI2	3.68	1.288	0.746			
AI3	3.72	1.282	0.722			
AI4	3.74	1.296	0.715			
AT1	3.95	1.242	0.774	0.737	0.818	0.601
AT2	3.89	1.292	0.795			
AT3	3.94	1.271	0.756			
BI1	3.77	1.254	0.742	0.756	0.831	0.552
BI2	3.71	1.269	0.753			
BI3	3.78	1.230	0.718			
BI4	3.72	1.290	0.758			
FC1	3.92	1.224	0.727	0.719	0.836	0.560
FC2	3.92	1.219	0.749			
FC3	3.92	1.225	0.769			
FC4	3.85	1.266	0.748			
HM1	4.08	1.106	0.783	0.764	0.800	0.574
HM2	4.09	1.105	0.745			
HM3	4.05	1.141	0.744			
PB1	4.21	0.943	0.836	0.877	0.861	0.675
PB2	4.21	0.931	0.831			
PB3	4.21	0.929	0.798			
PE1	4.19	1.070	0.8	0.829	0.860	0.608
PE2	4.14	1.141	0.77			
PE3	4.15	1.114	0.807			
PE4	4.05	1.187	0.74			
PEU1	4.21	0.982	0.787	0.917	0.916	0.686
PEU2	4.18	1.008	0.876			

Construct and Items	Mean	Std. Deviation	Factor Loading	CR	Cronbach Alpha	AVE
PEU3	4.21	0.977	0.844			
PEU4	4.21	1.016	0.814			
PEU5	4.20	1.000	0.819			
PR1	2.18	1.242	0.729	0.701	0.788	0.555
PR2	2.25	1.281	0.773			
PR3	2.30	1.283	0.732			
PU1	4.25	0.947	0.792	0.853	0.841	0.641
PU2	4.23	0.958	0.825			
PU3	4.23	0.972	0.784			
SI1	3.98	1.037	0.777			
SI2	3.99	1.042	0.748	0.801	0.815	0.595
SI3	3.97	1.061	0.789			

5.1. Discriminant Validity

The outcome of the descriptive statistical analysis of 'adoption of fintech apps' specifies that the item "AI1 I intend to use fintech applications for managing bank accounts" with the highest mean score of 3.64 and SD of 1.294. The findings align with research on adoption, which indicates that users' willingness to adopt technology is influenced by perceived benefits, ease of use, and personal experiences [38, 33].

The overall analysis of various factors influencing the adoption of fintech users reveals interesting insights. Among the factors, Perceived Usefulness has the highest mean score of 3.96, indicating that users find fintech applications helpful for improving their performance and efficiency. Hedonic Motivation follows closely at 3.87, suggesting that users also find the use of fintech apps enjoyable and fun.

5.2. Analysis of Structural Model

The model fitness indices presented in the table reflect the goodness-of-fit for the Structural Equation Modeling (SEM) analysis. The Absolute Fit Indices include the p-value, which is 0.000, indicating that the model is significant ($p > 0.05$) and suggesting a good fit. The Root Mean Square Error of Approximation (RMSEA) is 0.036, which is well below the recommended threshold of < 0.08 [32], confirming a good fit. The Goodness of Fit Index (GFI) is 0.921, which is above the required value of 0.90 [34], indicating that the

model is a good fit. The Incremental Fit Indices also support the model's fitness. The Adjusted Goodness of Fit Index (AGFI) is 0.905, meeting the recommended value of > 0.90 [37]. The Comparative Fit Index (CFI) is 0.960, which exceeds the threshold of > 0.90 [30], indicating a good fit. The Tucker-Lewis Index (TLI) and Normed Fit Index (NFI) are 0.954 and 0.922, respectively, with the TLI slightly below the recommended 0.95 [29] but still providing a good fit overall. The Parsimonious Fit index, Chi-square/DF ratio, is 2.946, which falls within the ideal range of 2 to 5 [36], indicating a good fit. Lastly, the Root Mean Square Residuals (RMR) is 0.034, which is well below the threshold of < 0.08 [35], confirming a good fit. Overall, the model exhibits strong goodness-of-fit across all indices, suggesting that it is well-specified and reliable shown in Table 4.

Table 4 - Model fit indices of structural model

S. No	Indices Category	Model Fitness Indices	TAM Model	UTAUT Model	Integrated Model Value	Recommended Values	Result
1.	Absolute Fit Indices	p value	0.000	0.000	0.117	P > 0.05 [39]	Absolute fit
		RMSEA	0.142	0.352	0.036	< 0.08 [32]	Good Fit
		GFI	0.869	0.556	0.921	> 0.90 [34]	Absolute fit
2.	Incremental Fit Indices	AGFI	0.884	0.171	0.905	> 0.90 [37]	Absolute fit
		CFI	0.845	0.372	0.960	> 0.90 [30]	Absolute fit
		TLI	0.862	0.121	0.954	> 0.95 [29]	Absolute fit
		NFI	0.841	0.372	0.922	> 0.95 [31]	Absolute fit
3.	Parsimonious fit	Chi-square / DF	15.547	89.991	2.946	2 to 5 [36]	Good Fit
4.	Miscellaneous Measure	RMR	0.166	0.335	0.034	< 0.08 [35]	Good Fit

5.3. Hypothesis Testing (Structural Model)

The second-order SEM is used to examine the key determinants of adoption of fintech services of public sector banks in Virudhu Nagar District with the help of structural equation model.

Table 5 - Determinants of attitude, behavioral intention and adoption of Fintech applications.

Path	Unstd. Estimate	Std. Estimate	S.E.	C.R.	P Value
PR→AT	-0.114	-0.139	0.027	-4.165	<0.001**
HM→AT	0.123	0.134	0.031	4.004	<0.001**
PEU→AT	0.208	0.205	0.034	6.157	<0.001**
PU→AT	0.205	0.197	0.035	5.901	<0.001**
PE→AT	0.115	0.124	0.031	3.717	<0.001**
SI→AT	0.124	0.127	0.033	3.800	<0.001**
FC→AT	0.132	0.153	0.029	4.580	<0.001**
PB→AT	0.181	0.171	0.035	5.141	<0.001**
PE→BI	0.131	0.145	0.030	4.427	<0.001**
PB→BI	0.126	0.122	0.034	3.717	<0.001**
PR→BI	-0.066	-0.083	0.026	-2.522	0.012*
HM→BI	0.289	0.322	0.029	9.827	<0.001**
FC→BI	0.082	0.098	0.028	2.987	0.003**
SI→BI	0.200	0.211	0.031	6.441	<0.001**
AT→BI	0.118	0.121	0.034	3.504	<0.001**
BI→BI	0.556	0.493	0.037	15.074	<0.001**
AT→BI	0.118	0.108	0.036	3.289	0.001**

The Table 5 results from the Structural Equation Modeling (SEM) analysis reveal significant relationships between various factors influencing the attitude, behavioral intention, and adoption toward fintech applications. Perceived Risk (PR) negatively impacts attitude ($\beta = -0.139$, $p < 0.001$), while Hedonic Motivation (HM) ($\beta = 0.134$, $p < 0.001$), Perceived Ease of Use (PEU) ($\beta = 0.205$, $p < 0.001$), Perceived Usefulness (PU) ($\beta = 0.197$, $p < 0.001$), Performance Expectancy (PE) ($\beta = 0.124$, $p < 0.001$), Social Influence (SI) ($\beta = 0.127$, $p < 0.001$), Facilitating Conditions (FC) ($\beta = 0.153$, $p < 0.001$), and Perceived Benefits (PB) ($\beta = 0.171$, $p < 0.001$) all have positive influences on attitude towards fintech applications in Figure 2. These findings align with prior studies suggesting that ease of use and perceived benefits contribute positively to users' attitudes [38, 33]. Similarly, these factors also significantly influence behavioral intention to use fintech apps, with HM ($\beta = 0.322$, $p < 0.001$), FC ($\beta = 0.098$, $p = 0.003$), SI ($\beta = 0.211$, $p < 0.001$), and PB ($\beta = 0.122$, $p < 0.001$) showing positive impacts, and Perceived Risk ($\beta = -0.083$, $p = 0.012$) having a negative effect. Notably, attitude towards fintech applications positively affects behavioral intention ($\beta = 0.121$, $p < 0.001$), and behavioral intention is a significant predictor of adoption ($\beta = 0.493$, $p < 0.001$). These results underscore the importance of user perceptions and motivations in determining

the adoption of fintech apps, supporting the unified theory of acceptance and use of technology (UTAUT) framework [38].

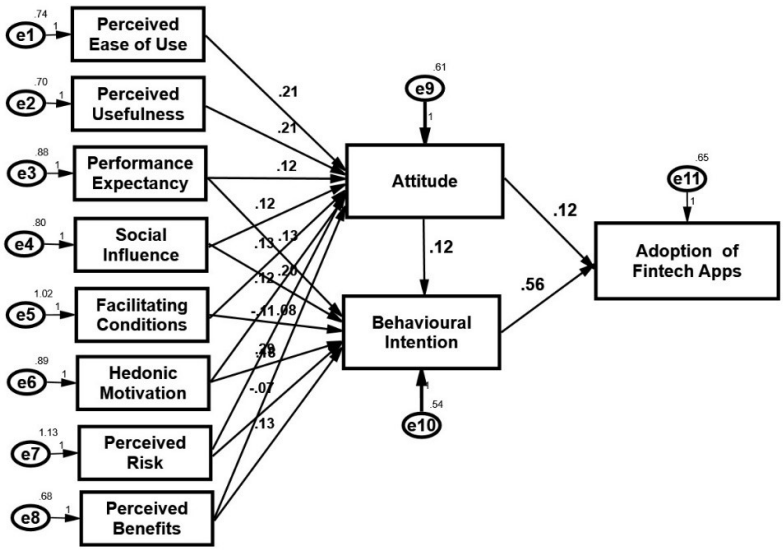

Figure 2 - Measurement Model results

5.4. Regression

Table 6: Regression Coefficients- Determinants of attitude of fintech users

Model		Un standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.486	0.225	-	2.159	0.031*
	Perceived Ease of Use	0.238	0.046	0.189	5.174	<0.001**
	Perceived Usefulness	0.214	0.045	0.169	4.767	<0.001**
	Performance Expectancy	0.154	0.046	0.133	3.312	0.001**
	Social Influence	0.303	0.048	0.249	6.342	<0.001**
	Facilitating Conditions	0.121	0.042	0.117	2.909	0.004**
	Hedonic Motivations	0.124	0.042	0.115	2.973	0.003**
	Perceived Risk	-0.112	0.031	-0.108	-3.629	<0.001**
	Perceived Benefits	0.239	0.046	0.206	5.196	<0.001**

The regression analysis of factors influencing the attitude towards fintech services reveals significant relationships between various predictors and the dependent variable shown in Table 6. The overall model demonstrates a

strong fit, with an R-squared value of 0.795, indicating that approximately 79.5% of the variance in attitude is explained by the predictors. Among the significant factors, social influence has the strongest positive impact on attitude ($B = 0.303$, Beta = 0.249, $p < 0.001$), suggesting that social pressure and the influence of peers play a crucial role in shaping users' perceptions of fintech services (Venkatesh et al., 2024). Perceived ease of use ($B = 0.238$, Beta = 0.189, $p < 0.001$) and perceived usefulness ($B = 0.214$, Beta = 0.169, $p < 0.001$) also have positive influences, reinforcing the importance of user-friendly and beneficial features in driving positive attitudes (Davis, 2024). Performance expectancy ($B = 0.154$, Beta = 0.133, $p = 0.001$) and facilitating conditions ($B = 0.121$, Beta = 0.117, $p = 0.004$) further contribute to enhancing attitudes towards fintech applications. Conversely, perceived risk ($B = -0.112$, Beta = -0.108, $p < 0.001$) and perceived benefits ($B = -0.239$, Beta = -0.206, $p < 0.001$) have negative impacts, indicating that concerns over risks and perceived lack of benefits can hinder users' attitudes.

5.5. Managerial Implications

This study has several practical implications for public sector banks aiming to increase the adoption of Fintech services in Virudhunagar District. First, banks should focus on improving the usability of their Fintech applications by ensuring they are easy to navigate, visually appealing, and accessible for all customer segments, particularly those in rural areas. Additionally, offering customer support through multiple channels, such as helplines, chatbots, and in-person assistance, can help address the technological barriers faced by users. Second, public sector banks must communicate the practical benefits of their Fintech services clearly. By highlighting the time-saving features, cost-effectiveness, and financial management tools available through these services, banks can increase the perceived usefulness of Fintech apps. Offering targeted financial products, such as microloans, customized savings plans, and investment opportunities, can also help demonstrate the value of these services. Moreover, leveraging social influence by involving community leaders and influencers in promoting Fintech services can further enhance customer adoption. Public sector banks can also use social media campaigns and customer testimonials to encourage adoption by emphasizing

how others in the community have successfully used these services. Additionally, banks must invest in improving facilitating conditions, such as internet access and smartphone availability. In partnership with local telecom providers, banks could offer affordable data plans or discounts on smartphones to make Fintech services more accessible to low-income customers.

5.6. Limitations and Future Research

A long-term study could examine how adoption attitudes evolve over time as users gain more experience with Fintech services, providing insights into sustained engagement and retention factors. Exploring psychological aspects like trust, anxiety, and user emotions could provide a more comprehensive understanding of Fintech adoption beyond practical factors such as ease of use and usefulness. In conclusion, further research in these areas could provide more nuanced insights into Fintech adoption, guiding policymakers and institutions in improving services and fostering wider acceptance.

6. CONCLUSION

This study aimed to investigate the factors influencing the adoption of Fintech services offered by public sector banks in Virudhunagar District, Tamil Nadu.

By examining several factors such as perceived ease of use, perceived usefulness, performance expectancy, social influence, facilitating conditions, hedonic motivation, perceived risk, and perceived benefits, the study provides a comprehensive understanding of the determinants that can encourage or hinder the adoption of Fintech services in this context.

The findings from the analysis suggest that factors such as perceived ease of use, perceived usefulness, social influence, facilitating conditions, and hedonic motivation play significant roles in influencing customers' adoption, while perceived risk negatively affects this intention.

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